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ENGINEERING SERVICES FOR RURAL ROADS  
REHABILITATION (ES3R)  
CONTRACT NO: EDH-I-00-08-00023  
YEAR 1, QUARTER 3  
PROGRESS REPORT (TO JUNE 2014)

20 July 2014

# ENGINEERING SERVICES FOR RURAL ROAD REHABILITATION (ES3R) CONTRACT NO. EDH-I-00-08-00023

## YEAR 1, QUARTER 3

## PROGRESS REPORT (TO JUNE 2014)

**Prepared for:**    **USAID/Liberia**

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20 July 2014

The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government. This report was prepared for the U.S. Agency for International Development. It was prepared by CDM International, Engineering Services Rural Roads Rehabilitation (ES3R)

## Acronyms

A & E	Architect and Engineer
BoQ	Bills of Quantity
COP	Chief of Party
COR	Contracting Officer Representative
ES3R	Engineering Services for Rural Roads Rehabilitation
ETL	Engineering Team Leader
FED	Food and Enterprise Development
FTF	Feed the Future
FTL	Field Team Leader
F2M	Farm to Market
F2MRR	Farm to Market Road Rehabilitation
GIS	Geographic Information System
GOL	Government of Liberia
LESSP	Liberia Energy Sector Support Project
LMWP	Liberia Municipal Water Project
MOF	Ministry of Finance
MPEA	Ministry of Planning and Economic Affairs
MPW	Ministry of Public Works
OCA	Organizational Capacity Assessment
PIRS	Performance Indicator Results Sheet
RE	Resident Engineer
SI	Site Inspector
USAID	United States Agency for International Development

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

**YEAR 1, QUARTER 3, APRIL TO JUNE 2014**

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# 1. SUMMARY PROJECT DESCRIPTION

## 1.1 Introduction

The U. S. Agency for International Development's (USAID) 'Engineering Services for Rural Roads Rehabilitation (ES3R)' was awarded to Camp Dresser McKee International (CDM) under the following USAID contract number: EDH-I-00-08-00023 and task order AID-669-TO-13-00002 which records the period of performance as 8 October 2013 to 20 October 2015.

Liberia's Farm to Market Rural Roads (F2MRR) activity is allied to the objectives of the Feed the Future (FTF) initiative, which is a U.S. government initiative, which aims to address the root causes of global hunger by sustainably increasing agricultural productivity. F2MRR will provide infrastructure investment in the rehabilitation of rural farm-to-market roads to support the following:

- USAID /Liberia FTF program Food and Enterprise Development (FED),
- Capacity development for routine maintenance systems within the Government of Liberia (GOL),
- Capacity development of Ministry of Public Works (MPW) rural roads engineers and local A & E firms,
- Development of alternative low volume road pavement pilot projects, standards and design specifications.

## **1.2 Objectives**

Within F2MRR, ES3R will be an implementing mechanism which will undertake the following objectives:

### **Objective 1:**

Provide construction oversight for three (3) local contracts for the rehabilitation of a total of 83.5 kilometers farm-to-market roads in Bong, Lofa, and Nimba counties from 2013 to 2015.

### **Objective 2:**

Produce engineering designs and construction documents for the 450 kilometers farm-to-market roads in Bong, Lofa, Nimba, and Grand Bassa counties to be rehabilitated in 2015 to 2018.

### **Objective 3:**

Training and pre-qualification of five (5) local architect-engineer firms capable of providing oversight for road rehabilitation activities by 2015.

## 2. QUARTERLY OVERVIEW

This is the third quarterly progress report to be presented in respect of Year 1 of the project, in view of which, the material presented deals primarily with the commencement of the preliminary design process, inclusive of the identification of the link roads, road inventory surveys, data processing and cost estimates leading to road prioritization and determination of road section ranking. In addition, the report details the status and approach to challenges on the project and presents the proposed Work Schedule for the next quarter. A financial report is also included.

### 2.1 Quarter 3 Highlights Summary

This section provides a summary of the items which were undertaken during Quarter 3 (by month) in the operations for the project. The highlights of these will be further detailed later in the section.

APRIL 2014		
Date	Description	Comment
1 Apr	Meetings with USAID on trip schedule	Meet in Ganta
1 Apr	Visit to Bahn – Payee road with contractor	ETL & site staff
1 Apr	Site Progress Meeting with Contractor	Meeting on site
2 Apr	ES3R Ground Breaking by American Ambassador	Nimba Road, Payee
2 Apr	Depart for Gbarnga & visit potential office	Gbarnga
3 Apr	Site visit to Gbenquelleh – Janyea road	with Westwood
3 Apr	Site Progress Meeting with Contractor	Meeting on site
3 Apr	Depart for Voinjama	ETL
4 Apr	Site visit to Galamai road	Little work done
4 Apr	Site Progress Meeting with Contractor	Meeting in Voinjama
4 Apr	Depart for Gbarnga	ETL



5 Apr	ES3R Meetings internal and with COR	Technical matters
5 Apr	Depart for Monrovia	ETL
7 Apr	Motorcycle source waiver requested	Request to USAID
8 Apr	Country Clearance/Travel request Karen Menczer	Enviro. Specialist
8 Apr	Country Clearance provided for Environmentalist	COR E-mail
9 Apr	Weekly Meeting with USAID	CDM Office
14 Apr	Resubmit motorcycle source waiver	Request by USAID
14 Apr	Commence Visit to Grand Bassa county	Meet with COR
15 Apr	Meeting with FED County Manager, Buchannan.	ETL, COR & FTL
15 Apr	Meeting with Development Superintendent, G B.	ETL, COR & FTL
15 Apr	Onward to Gbarnga via Monrovia	Gbarnga overnight
16 Apr	ES3R Meetings internal and with COR	All field staff & COR
16 Apr	Training Program Financial submission (P Macy)	Submit to USAID
17 Apr	Return to Monrovia & county destinations	ETL
18 Apr	Quarterly Progress Report submitted to USAID	Quarterly Y1,Q2
21 Apr	Site Inspectors available for duty	SI's to ES3R office
22 Apr	Weekly Meeting with USAID	CDM Office
23 Apr	K. Menczer Arrival in Monrovia	Environmentalist
24 Apr	Contact with USAID EO / depart for Gbangra	COP & E Specialist
25 Apr	Arrive Voinjama, visit all site roads.	Visit site team
26 Apr	Discussion and Site Meeting with SSF	Meet at SSF office
27 Apr	Arrive Gbarnga, visit Tolomai - Palala Road, Bong.	Meet FTL for visit
27 Apr	Travel to Ganta, meet FTL	Internal discussions
28 Apr	COR and AEO meet ES3R team in Ganta	Early am meet
28 Apr	Visit all site roads, MPW RE/USAID & ES3R Team	Site Visits
29 Apr	Site meeting with 21 <sup>st</sup> Century	Meet in Ganta
30 Apr	Depart Ganta to Westwood site Gbenquelleh	ES3R & USAID
30 Apr	Visit two site roads from Gbenquelleh	Team & Westwood

	<b>MAY 2014</b>	
<b>Date</b>	<b>Description</b>	<b>Comment</b>
1 May	Site meeting with Westwood	Meet in Gbarnga
1 May	Depart Gbarnga, return to Monrovia	COP & E Specialist
2 May	Meeting with USAID Environmental Officer	COP & E Specialist
3 May	Environmental Specialist departs Liberia	Visit complete

5 May	Bong & Nimba FTL/RE travel to Grand Bassa	Meet FED CM
6 May	Meet FED field & extension staff to map areas	In Buchanan
6 May	Grand Bassa (GB) road survey work commences	Districts 1 & 2
7 May	Meeting with Dep Minister Paye at MPW	Meeting with COP
7 May	GB road survey continues through 9 May	Districts 1,2,3 & 4
9 May	Meet Prosper staff & FDA extension officer	In Buchanan
9 May	Weekly Meeting with USAID	CDM office
9 May	Monthly Progress Report submitted to USAID	April 2014
9 May	Lofa FTL returns to site with SI & equipment	FTL return to Lofa
10 May	Inventory and condition assessment data process	Data entry
12 May	Bong team to Gbaranga from G Bassa surveys	Bong team return
12 May	GB road survey and meet with Prosper staff	District 3 roads
12 May	Automatic levels procured in Monrovia	Auto Levels
13 May	GB meet with County Planner, FED & prosper	In Buchannan
13 May	Nimba team completes G Bassa surveys	En route to Ganta
16 May	Visit SIDA – meet Jallah Kennedy	Programme officer
19 May	Prioritization Presentation invites by USAID	Meeting 27 May pm
20 May	Jim Clarke arrives Monrovia	Jim Clarke
20 May	Motorcycles delivered in Monrovia	To sites 21 May
21 May	Up country visit to Gbarnga for team meeting	Howard & Jim
22 May	Team meeting- status for prioritization tool	Meet at FED, Cari
22 May	Return to Monrovia (with car for upgrade)	Arrive Monrovia
24 May	No objection to A & E Firms selection	USAID advice
26 May	Accountant (E Becker) arrives in Monrovia	SA head office
27 May	MPW Rural Infrastructure Sector Co-ord meeting	Stakeholders; a.m.
27 May	Presentation on Multi Criteria Analysis, USAID	Stakeholders; p.m.
28 May	Weekly Meeting with USAID	CDM office
30 May	Depart Monrovia for up country visit	ETL to sites
31 May	E Becker departs Monrovia	Return to SA

	<b>JUNE 2014</b>	
<b>Date</b>	<b>Description</b>	<b>Comment</b>
1 June	ETL and COR meet in Ganta – status review	Assess data
2 June	Nimba prioritization workshop preparation	Meet MPW RE
3 June	Travel to Gbarnga – review Bong workshop	ETL & COR

4 June	Driver returns up country with necessities	Staff resources
4 June	Bong Road Prioritization Workshop	County Admin
5 June	Site visits to Bong roads projects	Janyea & Molly's Tn
5 June	Site meeting with Westwood contractor	Gbenquelleh
6 June	Site visits to Nimba roads projects	Team & MPW RE
6 June	Site meeting with 21 <sup>st</sup> Century Engineering	Bahn Site
7 June	Depart Ganta – travel to Voinjama via Gbarnga	Meet Bong FTL
8 June	Customize Lofa workshop and rehearse	Team
9 June	Lofa Road Prioritization Workshop	Voinjama
10 June	Site meeting with SSF contractor	SSF office
10 June	Travel to Ganta and finalize presentation	Team
11 June	Nimba Road Prioritization Workshop	Sanniquelle
12 June	Travel to Gbarnga for scheduled team meetings	FED offices CARI
13 June	Team meetings wrap and travel to Monrovia	ETL & COP
18 June	Meeting with Dep Min Paye, MPW	COR, COP & ETL
18 June	Weekly Meeting with USAID	Embassy Suites
18 June	Coordination meeting with GIZ	COP & ETL
18 June	Meetings with Westwood and 21 <sup>st</sup> Century	COR & ETL at ES3R
20 June	Issuance of Tax Clearance Certificate	MOF Issue
20 June	Visit to Buchanan to County Administration	HMS & OM
22 June	Travel to Buchanan for workshop preparations	ETL & Nimba team
23 June	Purchase of survey equipment from SA finalized	Level & wheels
24 June	MPW nominee to attend Grand Bassa workshop	Richmond Harding
25 June	Travel to Buchanan for workshop with resources	COP meets team
25 June	Team finalization of Prioritization Workshop	Team dry run
26 June	Grand Bassa Road Prioritization Workshop	Buchanan
26 June	Advice from Lofa of updated Ebola information	FTL advice on team
26 June	Key staff decision to evacuate Lofa team asap.	Relocate to Nimba
27 June	Team return to Monrovia	Meet at M Office
28 June	Vehicle to Lofa for evacuation support	4 x 4 & driver
29 June	Lofa team travels to Ganta (temporary)	2 vehicles loaded
30 June	Relief vehicle returns to Monrovia	4 x 4 to Monrovia

## **2.2 Quarter 3 Details of Highlights**

### **2.2.1 Ground Breaking Ceremony for F2MRR (at ES3R)**

The U. S. Ambassador, Deborah Malac, embarked on a visit to USAID projects in Nimba County which included the Groundbreaking Ceremony for Farm to Market Road Rehabilitation project which took place in Payee, Nimba County on 2 April 2014.

Those in attendance at the ceremony included the District Commissioner, Gbor District; Superintendent, Nimba County; Minister of Public Works, USAID Senior Officials, County and District Officials, ES3R contractor and consultant teams, in witness of a highly successful event.

### **2.2.2 Meetings with USAID/Liberia**

The continuance of regular meetings has been maintained between ES3R key staff and USAID/Liberia. These meetings have been generally held at the ES3R offices at appropriate intervals according to staff availability in Monrovia. This project demands regular visits up country to the counties road construction sites where regular technical discussions are also held with USAID staff as a result of many observations which have been made during site inspections.

### **2.2.3 Project Deliverables and Documentation**

The following deliverables and documentation were finalized and submitted to USAID during Y1, Q2:

- Motorcycles Source/Manufacture Waiver Request on 7 April
- Team Member Country Clearance/Travel Request on 8 April
- Motorcycles Source/Manufacture Waiver Request on 14 April

- Proposed USAID / ES3R Modification 2 on 16 April
- Year 1, Quarter 2, Progress Report on 18 April
- Monthly Progress Report – April 2014 on 9 May
- Town Country Clearance/Travel Request on 20 May
- Monthly Progress Report – May 2014 on 10 June 2014

#### **2.2.4 Environmental Specialist Visit to Liberia**

The nominated Environmental Specialist for the ES3R project, Karen Menczer, arrived in Monrovia on 23 April 2014 for the first scheduled visit to the project sites.

During the period from 24 April to 1 May 2014, site visits to Lofa, Nimba and Bong counties were carried out and all roads under the ES3R project were visited. This enabled the environmental and social assessments to be carried out as a result of which the following documentation was completed for each county.

- Environmental and Social Screening Checklist
- Environmental and Social Mitigation and Monitoring Plan
- Environmental and Social Mitigation and Monitoring Report
- Environmental and Social Mitigation and Monitoring Record

These plans and reports have been approved by USAID/Liberia and have been distributed as appropriate.

The summary report on the visit is included as Annex A of this report.

#### **2.2.5 Field Staff Deployment and Transport**

Site inspectors have been formally engaged since April 2014 and deployment to site was effected between Friday 9 May and Monday 12 May 2014. This mobilization completed the ES3R engaged staff complement, with trainees of A & E firms expected to be attached to

the teams in due course. Motorcycle transport which has been procured for these staff was delivered to the sites on 21/22 May 2014.

#### **2.2.6 Field Visits to Counties Sites**

Numerous visits to all project sites have been made during the Quarter by USAID/Liberia and ES3R key staff:

##### **April 2014:**

##### **Field Visits 1 – 5 April 2014 (ETL and USAID)**

The main purpose of these visits was for inspection of the roadworks, to be present at site progress meetings, to discuss resource requirements with field teams and to finalize monthly reports and program.

##### **Nimba County                      1 April 2014**

- Discussions with Contractor regarding Ground Breaking,
- Site visit with USAID and Contractor to Payee to Bahn Road,
- Site progress meeting with Contractor at Bahn,
- Meeting with USAID on review of U.S. Ambassador schedule

##### **2 April 2014**

- ETL and ES3R site team travel to Payee to Bahn Road,
- Attendance at F2MRR Ground Breaking Ceremony,

##### **Bong County                      3 April 2014**

- Depart Gbarnga to Westwood Camp at Gbenquelleh,
- Site visit with USAID to Gbenquelleh to Janyea Road,
- Site progress meeting with Contractor at Gbenquelleh,
- Travel to Voinjama.

##### **Lofa County                      4 April 2014**

- Site visit with USAID to Galamai Road – little work done,
- Site progress meeting with SSF in Voinjama,
- Travel to Gbarnga.

**Bong County                      5 April 2014**

- ES3R Team meeting of FTL's / COR re: design matters,
- Discussions with COR regarding training program,
- Depart Gbarnga for return to Monrovia.

**Field Visit 14 – 16 April 2014 (ETL)**

The main purpose of the visit was for the introduction of ES3R to Grand Bassa County stakeholders and later for coordination with ES3R field staff.

**Grand Bassa County            14 April 2014**

- Visit to Buchannan, Grand Bassa – meet up with COR,
- Meeting with FED county manager,
- Meeting with Development Superintendent, Grand Bassa.
- It is identified that GB has more water crossings and the likelihood to encounter large bridges (> 10M clear span) on the F2M roads.

**Bong County                      16 April 2014**

- Meeting ES3R field staff with USAID COR,
- Preparation of resource list for detailed design stage,
- Review and report on progress of GIS training,
- Inventory and rapid condition surveys to be progressed as soon as practical,
- ES3R field team meeting – options discussed on possible achievement of 150Km of detail design in year 1.

**Field Visit 24 April – 1 May 2014 (COP & Enviro Specialist)**

The purpose of these visits was in order to facilitate the introduction of the environmental specialist to the contracting teams and local stakeholders, visit all the ES3R road links and attend site meetings so that environmental checklists, reports and plans may be facilitated during the environmental specialist visit to Liberia.

**Bong County                      24 April 2014**

- Visit to Gbarnga en route to Lofa – meet Bong ES3R staff.

**Lofa County** **25 April 2014**

- Visit to Voinjama, initial discussions with FTL & RE,
- Site visits to all three F2M site roads with Contractor and ES3R field staff.

**Lofa County** **26 April 2014**

- Site meeting with SSF at Voinjama office,
- Meeting and discussions with FTL and RE.

**Bong County** **27 April 2014**

- Return visit to Gbarnga and meet with FTL,
- Visit to Tolomai – Leleh – Palala Road particularly for identification of environmental related matters,

**Nimba County** **28 April 2014**

- Meet up with USAID COR and AEO on arrival in Ganta,
- Site visit to all three F2M roads and Contractor's site camp with USAID, MPW RE, 21<sup>st</sup> Century CE and EO, ES3R staff,
- Numerous discussions on-site regarding workmanship and environmental related issues.

**29 April 2014**

- Site meeting with 21<sup>st</sup> Century held in ES3R office, Ganta,
- Meet with FTL for ES3R internal discussions

**Bong County** **30 April 2014**

- Travel to Gbenquelleh to meet ES3R & Westwood staff
- Site visits to roads from Gbenquelleh to both Janyea and to Duita – Molly's Town.
- Numerous discussions on-site regarding workmanship and environmental related issues.

**1 May 2014**

- Site meeting with Westwood Contractors held in Gbarnga.
- COR, ES3R and Westwood finalize F2M road interventions.
- COP & ES return to Monrovia.



### **Field Visits 30 May – 13 June 2014 (ETL; COP 12 & 13 June)**

The main purpose of these visits was for the preparation and delivery of prioritization workshops in the counties of Bong, Lofa and Nimba. In parallel with this, site visits and progress meetings were arranged and held in the said counties. Coordination and team discussions would be held as appropriate during the various events.

#### **Nimba County 30 May 2014**

- Discussions on progress with FTL & RE

#### **Nimba County 31 May 2014**

- Preparation for county workshops
- Discussion on structure of workshops

#### **1 June 2014**

- Discussion on data requirements
- Status of data collection with COR
- Meeting with SIDA delegation

#### **2 June 2014**

- Finalize Nimba workshop requirements
- Meeting with MPW RE Nimba

#### **Bong County 3 June 2014**

- Review status of Bong prioritization workshop
- Customize Bong presentation and structure

#### **4 June 2014**

- Bong Road Prioritization Workshop in Administration
- List of Bong roads prioritized
- Feedback to FTL's on outcome of Bong workshop

#### **5 June 2014**

- Visit to Bong site roads
- Site progress meeting with Westwood at Gbenquelleh
- Travel to Ganta via Westwood's Pallah Road

#### **Nimba County 6 June 2014**

- Discuss ideas for Nimba prioritization workshop
- Visit to Nimba site roads
- Site progress meeting with 21<sup>st</sup> Century in Payee

- Visit County Superintendent in Sanniquelleh
- Discussions with FTL & COR on various design/workshop

**Travel to Lofa 7 June 2014**

**Lofa County 8 June 2014**

- Customize workshop for Lofa County
- Review Lofa program with COR
- Dry run of Lofa presentation

**Lofa County 9 June 2014**

- Preparation for Lofa workshop
- Lofa Road Prioritization Workshop at Administration

**10 June 2014**

- Site visit to SSF roads
- Site progress meeting with SSF in Voinjama
- Travel to Ganta with discussions on Nimba workshop

**Nimba County 11 June 2014**

- Dry run on Nimba presentation (in Ganta)
- Nimba Road Prioritization Workshop in Sanniquelleh

**Bong County 12 June 2014**

- Team coordination with all FTL's, COR, COP, ETL & RE's
- Wrap up of three prioritization workshops.

**13 June 2014**

- Summary meeting with FTL's and RE's
- Return to Monrovia

**Field Visit 22 – 27 June 2014 (ETL; COP 25 -27June)**

The main purpose of this visit was to organize and make preparations for the road prioritization workshop in Buchanan, deliver the workshop and to seek future accommodation for field staff.

**Grand Bassa County 22 June 2014**

- Search for suitable (future) accommodation in Buchanan

**23 June 2014**

- Meet and discuss with FED county manager
- Discussions with COR following arrival in Buchanan

#### **24 June 2014**

- Customize workshop for Buchanan
- Visit county administration for workshop preparations

#### **25 June 2014**

- Travel to Buchanan with COP after admin in Monrovia
- Dry run on Grand Bassa presentation

#### **26 June 2014**

- Grand Bassa Road Prioritization Workshop in Administrat'n
- Information from Lofa team of deterioration of Ebola situation in the County
- Discussions COP and ETL resolve that a withdrawal from Lofa county should be made
- Preliminary discussions on Lofa team redeployment.

#### **27 June 2014**

Return to Monrovia via visit to RMTC.

Field trip reports for those visits which were undertaken in June 2014 are included in Annex B of this document.

### **2.2.7 Road Prioritization Surveys**

The commencement of preliminary road surveys was undertaken during April 2014 after much communication, liaison and discussion with the following key stakeholders:

- USAID Staff
- County administrations
- MPW County Resident Engineers
- Senior County officials
- FED County Managers
- FED Field and Extension staff
- City Mayors
- District Commissioners
- USAID Implementing Partners

- Other Donor Agencies
- Communities within road corridors

A general summary of the roads surveyed is as follows:

<b>County</b>	<b>Road Length Surveyed</b>
Bong	261.6
Nimba	302.0
Lofa	196.3
Grand Bassa	237.3
<b>Total Length Surveyed (Km)</b>	<b>997.2</b>

It is from the roads which were subject to preliminary survey, the majority of which are simply formed tracks or paths, that a total of 450 kilometers of roads will be selected for F2M road design to be undertaken within the ES3R project.

During the survey exercise typical difficulties encountered were as follows:

- Unreliable information from local sources,
- Inaccuracy of mapping received from LISGIS,
- Poor access along tracks including broken bridges, fallen trees
- Lengthy dispersal of tracks,
- Unidentified institutions,
- Establishment of populations in settlements,
- Availability of officials,
- Adjustment / additions to program,

Following the physical survey exercise, a vast amount of data was processed and as a result of the evaluation of the road inventories and conditions, a preliminary cost estimates was generated for each road link. In addition, population data was sourced, and this,

together with inventory data was included in a validation process prior to incorporation for the purpose of the road ranking.

#### **2.2.8 Design of Bridgeworks**

It is evident that numerous waterways on future road links will require bridge structures in excess of 10 meters to be addressed. Following discussion with USAID, ES3R will quantify the LOE required for the design of the bridges between 10m and 16m, for the development of standard bridge superstructure designs as well as a design guide checklist for substructure elements of bridgeworks for feeder roads in Liberia. This will be developed when sufficient information is at hand to enable an informed judgment of the extent of bridgeworks required, particularly in Grand Bassa County. The preliminary surveys have now been completed, thus, following the priority ranking of roads at the county workshops, the roads selected for design will be determined which will enable the extent of bridgeworks to be assessed.

#### **2.2.9 Multiple Criteria Analysis (MCA) Presentation**

During May 2014, final preparations were underway to facilitate the presentation of the Multiple Criteria Analysis, which is the tool by which the prioritization and selection of F2M roads will be assessed and evaluated.

The presentation was held on Tuesday 27 May 2014 with scheduled commencement at 14:00 hours at the U.S. Embassy, Monrovia.

Those staff who presented the MCA tool was as follows:

Michael Nicholson, USAID/Liberia, Mission Economist

David Wounuah, USAID/Liberia, COR ES3R

Jim Clarke, Lead Design Engineer, ES3R

The presentation was concluded with unanimous agreement amongst economists and transport planners in attendance, that MCA was the most appropriate method of assessing priorities for Farm to Market roads in Liberia.

A general summary of the Multiple Criteria Analysis as presented at the meeting is included in Appendix C of this document.

#### **2.2.10 Road Prioritization Workshops**

As a result of the acceptance of the appropriateness of the MCA tool as per the previous item, the ES3R teams proceeded to customize the tool for presentation at road prioritization workshops in each of the four counties where roads were to be selected for detailed design. This stage is very important in order that full opportunity be given to the key stakeholders and county communities to participate in the prioritization process, thereby providing a feeling of ownership for the selection of roads.

These road prioritization workshops were carried out in the county administration centers as follows:

<b>County</b>	<b>Date</b>
Bong	4 June 2014
Lofa	9 June 2014
Nimba	11 June 2014
Grand Bassa	26 June 2014

Each of the presentations was well attended, with good stakeholder and community participation, all of which facilitated the ranking of road links per county in order of priority.

The list of road links including the road ranking is included in Annex D of this document.

### 3. PROJECT OBJECTIVES PROGRESS

#### 3.1 Objective 1 – Construction Oversight

The mobilization for the works contracts took place from February to March 2014, at which early stage, it was apparent that the contractors' staff generally lacked the capabilities to perform the reporting and design functions of a design and construct contractor, this being a new concept for this type of road construction in Liberia. ES3R field staff mobilization ranged from February to mid May 2014, during which period the ES3R teams, particularly the FTL's and RE's, were engaged in considerable time input in the mentoring of contractors' staff and in support of the design and reporting process in order to facilitate reasonable progression of the works.

This situation gave rise to a generally slow start on all of the contracts, however, better progress has been achieved during the May / June period of this quarter with contractors concentrating on bush clearing, earthworks and the construction of drainage related elements. The Works are generally keeping pace with the allowable contract periods but the traditional scale down period for road contracts due to wet season conditions will have an adverse effect on this position as of the end of this season.

The general progress of each of the contracts as of the end of June 2014 is as follows:

**Bong:**

Overall assessed percentage completion: 21%

Percentage time elapsed: 28%

**Gbenquelleh – Janyea Road: (10.5km)**

**Gbenquelleh – Molly Town Road: (9.5km)**

**Tolomai – Palala Road: (29.9km)**

**General Progress Statements:** (all roads total 49.9km)  
(June quantity followed by total percentage in brackets)

Clearing of Bush:	2.5 km (64%)
Earthworks:	Reshape 7.5 km (36%)
	Embankment 500 m3 (13.5%)
Culverts:	Excavation 6 No (60%)
	Pipe installations 13 No (38.5%)
	Inlets/Outlets 8 No (29%)
Borrow sources opened:	2 new sources.

Financial:    Assessed Value of Works completed    \$395,687

                  Total Contract Value                                \$1,895,141.86

                  No Interim Certificates have been issued to date.

**Nimba:**

Overall assessed percentage completion:    38%

Percentage time elapsed:                                28%

**Bahn – Kpayee – Zuolor – Payee Road (14.4km)**

**Dwonwea - Zuo Lapa Road (4.1km)**

**Duanpea Road (2.5km)**

**General Progress Statements** (all roads total 21km):  
(June quantity followed by total percentage in brackets)



Clearing of Bush:	0.5 km (69%)
Earthworks	Grade and Shape 0.5km (69%)
	Embankment 1135m3 (20%)
	Gravel 1.1km (5%)
Culverts:	Excavation 4 No (91%)
	Pipe installations 6 No (91%)
	Inlets/Outlets 8 No (91%)
Borrow sources opened:	3 No

Financial:	Assessed Value of Works completed	\$312,053
	Total Contract Value	\$737,371.15
	Payments to Date	\$143,459.10
	Value of IPC2 (submitted)	\$137,388.87

### **Lofa:**

Overall assessed percentage completion: 34.4%

Percentage time elapsed: 28%

**General Progress Statements:** (as per individual roads)  
(June quantity followed by total percentage in brackets)

#### **Galamai Road (2.6km)**

Reshape and compact for total length complete

Gravel and compact for total length complete

Completion of culvert end structures for 3No 900 culverts

### **Bitijama Road (3.6km)**

Gravel and compaction from start to 300m

Completion of culvert end structures for 6No 900 culverts

Cast bottom slab concrete to double cell box culvert

### **Barkedu – Jamulor – Moibadu Road**

Clearing of bush complete (as per May 2014)

<b>Financial:</b>	Assessed Value of Works Completed	\$203,966
	Total Contract Value	\$592,384.35
	Payments to Date	\$ 63,248.80
	Value of IPC2 (submitted)	\$139,708.85

### **Lofa General Information**

The construction contractor (SSF) plans to scale down works as a result of the rains. A skeletal team including a concrete team, a maintenance team and an Engineer will be kept on the site during the full period of the rain (July to September) to continue works on an ongoing box culvert while also maintaining access on the road as is required by the contract.

SSF advised that the progress on two roads was well underway, there remaining a box culvert structure to be completed prior to temporary demobilization.

ES3R, as a result of the recent deterioration of the Ebola situation in the county, have decided to temporarily withdraw the field team from Voinjama. This position will be elaborated under the next item of this report.

### **QAC General Comments (all contracts)**

QAC comments as a result of the site meetings and inspections carried out during June 2014 are as follows:

- The contractors' project managers were not present at any of the progress meetings.
- The works on all projects are constrained because of the lack of resources available to the sites by head offices.
- There are project management concerns at two of the sites, namely, Nimba and Lofa.
- The quality of information /feedback by contractors' site staff is not being facilitated by head offices which need to be enhanced.
- A scrutiny of work done against time provides an indication that as of the end of the rainy season, during which work is expected to be nominal, the works projects will generally be behind time schedule.

### **3.2 Objective 2 – Design and Contract Documents**

During the latter part of the previous quarter, the majority of field team attention was focused on construction oversight. ES3R field staff, particularly FTL's and RE's, spent much time input in the mentoring and support of the design and reporting processes in order to facilitate reasonable progress of the works during these early stages in the contracts. This situation continued into the initial part of the reporting quarter, however, it was critically important that time input be given to the preliminary design prioritization phase which was commenced during April 2014.

The specific progress made on this objective during this reporting quarter has been achieved in three basic stages:

- Road Prioritization Surveys (Section 2.2.7)
- Multiple Criteria Analysis finalization (Section 2.2.9)

- Road Prioritization Workshops (Section 2.2.10)

The conclusion of the workshops in each of the counties has resulted in the ranking of all the roads which were subject to preliminary surveys, from which a prioritized list of roads per county has been derived. These lists have enabled the planning of the detailed design phase to be undertaken which will be commenced with the detailed design surveys of the selected roads.

The PIRS for the prioritized target roads is included in Annex E herein.

Following the receipt of information from the FTL in Lofa, ES3R immediately advised USAID/Liberia of their the decision to effect a temporary withdrawal from Voinjama, due to the recent deterioration of the Ebola situation in the County, coupled with the fact that the design team is presently undertaking field survey work which demands the hiring of local casual labour from the area. This position rendered the team uncomfortable, since there is apparent denial in the general surrounding area that the health problems being experienced are Ebola related, thus increasing the risk to the ES3R staff. The team will move temporary to Nimba, possibly onward to Grand Bassa, whilst the situation in Lofa will be monitored.

This will affect the ability for detailed design survey of the prioritized roads in the county which will be continued as and when the health situation in the county returns to normal.

### **3.3 Objective 3 – Training of A & E Firms**

A revised Pre-Qualification Report was submitted to USAID on 31 March 2014 which included additional management training as well as a technical training program which was developed by the ES3R in-country team. Further to this narrative submission an associated summary budget was submitted on 16 April 2014 which contained proposals for contract amendment/modification.

Since that time, ES3R have been advised to continue the training schedule for A & E firms in accordance with the original proposals submitted for the same. USAID/Liberia confirmed on 24 May 2014, that there was no objection to the selection process or recommended firms, thus the five firms selected for further participation in the ES3R project were contacted and advised of the principles and potential timing of the training program. The timing of the next specialist trainer visit is presently under discussion, however, it is expected to be finalized in the near future.

The PIRS related to this objective are included in Annex E herein.

## 4. PROJECT CHALLENGES

The following items have been encountered during the course of the quarter and pose challenges to the ES3R team and project:

Challenge / Issue	Mitigation / Resolution
Client has requested that contractors provide detailed design for all three road links in each contract at the earliest opportunity mainly due to CO leaving country in May 2014.	This is not a contract requirement and incremental design for road links to be constructed after the 2014 rains need to reflect any deterioration to roads as a result of the rainy season.
All contractors are struggling with the design / build contract model, thus require much support in preparation of submittals.	QAC has to offer inordinate amount of support to contractors in order that compliance be achieved and progress achieved.
ES3R and USAID agreed (in discussion) that a period of 2 – 4 weeks be allocated to mentoring contractors', which period ends in early April 2014.	ES3R must strike a balance between formal mentoring with contractors' and commencing focus on preliminary road surveys.
On the basis that FTL's can limit mentoring time AND SI's are deployed on site by (say) mid April, then approx. 6 months are available for survey, design and documentation.	FTL's will assess the mentoring position on site following deployment of SI's. The target road design of 150 km may be possible but is dependent on external factors and should be considered optimistic at this stage.
SI's have been deployed on site, thus more senior field team input will be available for survey, design and documentation.	FTL's will assess the mentoring position on site now that SI's are in the field so that QAC requirements are achieved.
The lack of availability of diesel fuel in both Lofa and Nimba has had a negative impact on logistics and travel plans.	Despite contingency measures being in place, specific journeys out of county have been required to secure fuel, thus loss of productive vehicle time.

The suitability of dates for the presentation of the MCA tool and for county based presentations and workshops led to unavoidable rescheduling of dates.	Significantly extended time periods in the preparation and presentation of the prioritization workshops has incurred unexpected delays resulting in further time requirement for Y1 documentation deliverables.
Deterioration of the Ebola outbreak in Lofa county in late June gave rise to ES3R to decide to temporarily withdraw the field team from the county.	Move team to temporary accommodation in Nimba, possibly onward to Grand Bassa. Monitor the health situation in Lofa.
MPW Technical Specifications and Method of Measurement which are required to be used in the contract documentation are neither finalized nor yet field tested.	ES3R have identified that from initial assessment, the specifications and Method of Measurement will require significant refinement for inclusion in the contract documents. Further work to be undertaken by ES3R.

## 5. WORK PLAN FOR NEXT QUARTER

The Work Plan for Year 1, Quarter 4 is presented in this section in terms of project objectives as follows:

### **Objective 1: Construction Oversight**

It is felt inappropriate to prepare a specific schedule for construction oversight for this Y1 Q4 for the following reasons:

- The country is now in the rainy season with the result that the contractors either have, or are in the process of scaling down the labour, plant and equipment.
- There is a contractual obligation in each of the three contracts to maintain access on the roads under construction, of which the contractors are well aware.

### **Objective 2: Design and Contract Documents**

- **Preparation and Coordination of Field Teams**

The focus on detailed design commenced following the final prioritization workshop in Grand Bassa held 26 June. A workshop was held to establish level of detail of the detailed road surveys and process. Series of workshops have been planned nominally at monthly intervals, to ensure consistency of approach to road survey activities; i.e. topographic field survey, nature and style of interventions, their measurement and presentation.

- **Design Standards**

ES3R is required to use MPW Feeder Road documents as the basis for all detailed design. The documents provided are not dated and as of the date of writing it is unclear as to the status of these documents.



An assessment of provided Feeder Roads Specifications/Method of Measurement and Standard Drawings is now underway, from which it would appear that these documents have yet to be field tested. Initial findings suggest that the documents will require to be further assessed and refined prior to incorporation in ES3R contract documentation.

The most significant examples are outlined below:

- Carriageway and longitudinal storm drainage

Regarding carriageway and longitudinal storm drainage improvements three options are potentially available:

Option A: uses the establishment of a selected cross section measured in cubic meters 'entitled 'crossfill' in the document provided. Contractors would require formal training for this option to be used.

Option B: uses the development of an existing geometric cross section. This option uses square meters as a means of measurement. The specifications and method of measurement require modification for this option to be used.

Option C: This would be a refined version of option two and a hybrid of option 1. This option combines the advantages of option A, insofar as the Contractor is reimbursed in a manner that reflects, to some extent, the input resource effort needed to execute the works and the relative simplicity of option 2. This option may then be used in circumstances where either the existing cross section is inappropriate or not evident.

Discussions with USAID and MPW are required before a conclusion is reached on which method of payment is to be used. ES3R field teams are using surveying techniques that permit either option to be selected.

- Cross Drainage Structures

A preliminary assessment of the standards for storm drainage has been undertaken. The review indicates the standards would benefit from some revisions and developments. Examples of limitations of the design standards are outlined below:

- Geometry of inlet and outlet pipe culvert structures provides no guidance regarding the connection with existing rivers/streams or longitudinal side drainage systems
- There is no detail relating to side slope protection for small water courses.
- Box culvert and small bridge configuration is limited to splayed wing walls and provides guidance only to structural detail. No detail is available regarding river training through the box culvert/bridge aperture.

Development and subsequent MPW approval of these standards is required prior to inclusion within tender documents.

- Approach to Field Based Detailed Design activities

The preferred and most efficient sequence of activities is listed below:

- Detailed site survey and preliminary intervention selection:
  - a) Assessment of traffic volumes and characteristics
  - b) Topographic survey along road length
  - c) Detailed topographic survey in vicinity of cross drainage structures
  - d) Preliminary survey of sources of borrow materials
  - e) Assessment of carriageway condition
  - f) Assessment of cause and mode of failure

g) Preliminary selection of remedial action required:

- Data processing:  
Reducing levels, drawing horizontal and vertical plans and profiles.
- Final intervention selection.  
This activity is conditional upon approval of recommended revisions to MPW standards.
- Quantification and preparation of design drawings
- Unit rate build up
- Packaging of road links
- Preparation of Tender documents

However, weather and road conditions arising from rains will largely dictate the sequence of activities. The field teams will follow the principle that if the weather and access are good and possible, then field surveying is prioritized.

Each road link will be treated independently both in terms of bill of quantities, associated drawings and, if necessary, method of measurement. Packaging of road links will take place following discussions with USAID and the decision as to the size of packages.

The project understands that USAID has a preference for a single package for each county. However it is suggested that an assessment be made regarding other road improvement contracts scheduled for commencement in construction season 2015 be undertaken to determine sector construction needs versus construction resources.

- Breakdown of Batch 1 Design Deliverables per County

USAID has directed that allocation of the F2MRR improved road length (450 + 84 = 534km) be allocated evenly amongst the four Project Counties i.e. 133.5 km per county.

ES3R has presented a guide for road improvement contracts over 4 years (2014 -17). The guide is illustrated in Table 1.

	2014	2015	2016	2017	total
<b>Bong</b>	49	15	34.75	34.75	<b>133.5</b>
<b>Nimba</b>	21	35	38.75	38.75	<b>133.5</b>
<b>Lofa</b>	14	40	39.75	39.75	<b>133.5</b>
<b>GB</b>	0	60	36.75	36.75	<b>133.5</b>
<b>total</b>	<b>84</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>534</b>

**Table 1: Road Improvement Contracts over F2MRR program**

The shaded column in the table suggests a guide regarding detailed design targets for first Project deliverable due on 20 October 2014 anticipated to be let for construction season 2015. The allocation attempts to redress the imbalance created by the initial road improvement contracts.

The allocation per Field Team is illustrated in table 2.

Team	FT Bong	FT Nimba	FT Lofa
<b>Bong</b>	15		
<b>Nimba</b>	0	35	
<b>Grand Bassa</b>	40	20	
<b>Lofa</b>	0	0	40
<b>Total</b>	<b>55</b>	<b>55</b>	<b>40</b>

**Table 2: County Road Design Allocation versus Field Team - Original**

- Lofa Withdrawal

A temporary withdrawal of the Lofa Field Team on 29<sup>th</sup> June 2014 following escalation of the Ebola crisis required a revision to this schedule.

The Lofa team had, at the point of temporary suspension of field works in the county, completed 15 km of survey along John's town road. It is unlikely that a return is possible before end of this planning period. The Lofa team has been temporarily deployed in Nimba county.

- Resource reallocation

The deployment of the Lofa Team in Nimba is proving efficient and effective i.e. sharing of resources and optimized collaboration and coordination. With the objective of maximizing outputs within a minimum timeframe it is strongly recommended that the Lofa Team work within the same County as the Nimba team i.e. Nimba roads designed by team Nimba and Team Lofa then deployment of both to Grand Bassa. A detailed breakdown of roads by length and District will be contained in the Consolidated Road Prioritization Report.

<b>Team</b>	<b>FT Bong</b>	<b>FT Nimba</b>	<b>FT Lofa</b>
<b>Bong</b>	50	0	0
<b>Nimba</b>	0	16	21
<b>Grand Bassa</b>	0	34	29
<b>Lofa</b>	0	0	0
<b>Total</b>	<b>50</b>	<b>50</b>	<b>50</b>

**Table 3 County Road Allocation versus Field Team - Revised**

As detailed design phase commenced only 1 July 2014, productivity for detailed design has yet to be assessed. However, initial indications are that 2km/per team /week may be possible. Given the weather uncertainty with its impact on access along prioritized roads and the field surveying, it is not realistic to accurately predict what is achievable during the next 3 months.

On the basis that 2 km/team/week is feasible and 16 weeks available, then the equivalent of  $16 \times 2 \times 3 = 100\text{km}$  of road will have been completed by 20 October 2014. It should be noted that design output of 2km/team/week reflects the uncertainty of weather, road conditions and national staff training.

An indicative work plan is included within this section, however, the sequence of design activities will be determined by road conditions and prevailing weather.

(Note that the 15km of road survey undertaken in Lofa before withdrawal is a fraction of the road link (21km) and cannot be included in the deliverable batch).

- Capacity Development of National Staff

In March 2015 a succession will take place with international staff replaced with national staff. In order to realize this succession, the detailed design sequence necessarily includes mentoring of the senior and junior field team engineers.

- Bridges

During the preliminary road surveys phase in May and June 2014, it was noted that bridges longer than 10 meters would be needed in each of the four counties. During the field surveys which have been recently undertaken, clearing in the vicinity of the existing bridges has revealed that river networks as well as the presence of older, failed, bridge structures have significant implications for appropriate intervention selection.

Until surveys are completed and potential bridge sites exposed and assessed during this coming quarter, it is not practical to quantify the number and nature of bridges required. In liaison with USAID/Liberia, the motivation for a contract modification is under preparation.

YEAR 1, QUARTER 4						
	Activity	Sub Activity	Jul-14	Aug-14	Sep-14	Oct-14
component 1	QAC	Maintenance of access				
component 2	Presentation of Consolidated prioritization report	Presntation of consolidated prioritization report				
		Confirmation of Selection				
	Bong Field work	Determine cross sectional geometry (traffic counts)				
		Topographic survey - longitudinal and lateral as necessary				
		Carriageway defect assessment				
		Preliminary assessment of remedy				
		Assessment of watercourses				
		Preliminary assessment of cross drainage intervention				
		Preliminary assessment of borrow materials				
	Office work	Field data processing				
		Intervention selection				
		Intervention quantification				
		Unit rate analysis				
		Preparation of BoQs				
	Nimba: team Nimba/Lofa field	Activities as per Bong				
	Nimba TeamNimba/ lofa Office					
	Grand Bassa Team Nimba/Lofa Field	Activities as per Bong				
	Grand Bassa Team Nimba/Lofa Office					
	Standard Details	Review				
		Revision				
		Approval				
	Specification and method of measurement	Review				
		Revision				
		Approval				
	Bridgework	Request for Contract Amendment				
		Approval				
		Procurement				
Component 3	A & E Firm Training	Workshop on orientation and engagement 17-19 Sept.				
		Workshop and Leadership and management 24-26 Sept.				

## FIELD DESIGN SCHEDULE



### **Objective 3: Training of A & E Firms**

The progress of this objective during Quarter 2 has been addressed in section 3.3 of this document.

The training specialist who undertook the initial training visit to Liberia has since incurred a medical condition which will preclude his further participation in the project; this being an item which has only recently been evident and stipulated by his physician. The timing of the next specialist trainer visit therefore, is presently under discussion and it is expected that this will be carried out during quarter 4, probably during September 2014. Such a revised schedule for the training component is considered to be suitable to the project stages, in that any A & E firm trainee will be available for construction oversight at the recommencement of site operations following the rainy season; in addition, it would be advantageous that any trainees entering the field design program, do so immediately following the commencement of the next survey / design cycle which is expected to commence during November 2014.

## 6. FINANCIAL REPORT

We include hereafter a summary of project expenditure from project commencement to end June 2014.

ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION			
FINANCIAL REPORT TO END JUNE 2014			
Row Labels	Sum of RAW COST	Inidrect Cost	TOTAL Cost
01-Auto - A/P	12,518.00		12,518.00
01-Mileage - expense	16.81		16.81
03-Room - A/P	66,474.49		66,474.49
03-Room - expense	5,944.10		5,944.10
04-Park, Toll, Taxi - A/P	9,450.10		9,450.10
04-Park, Toll, Taxi - expense	136.36		136.36
05-Prints - A/P	174.66		174.66
05-Prints - expense	87.00		87.00
06-Supplies - A/P	173,164.55		173,164.55
06-Supplies - expense	110.00		110.00
07-Miscellaneous - A/P	28,167.61		28,167.61
07-Miscellaneous - expense	523.50		523.50
08-Telephone - A/P	2,362.00		2,362.00
08-Telephone - expense	58.00		58.00
09-Car Rental - A/P	1,875.00		1,875.00
09-Car Rental - expense	350.00		350.00
10-Air Fare - A/P	4,808.40		4,808.40
10-Air Fare - expense	7,126.18		7,126.18
11-Outside Professionals	204,731.00		204,731.00
12-Computer - A/P	10,644.20		10,644.20
19-Shipping, Postage - A/P	110.00		110.00
24-Field Equipment - A/P	50,750.70		50,750.70
26-Auto - expense	170.00		170.00
28-Overnight Delivery - A/P	15.92		15.92
30-Meals - A/P	6,580.30		6,580.30
30-Meals - expense	2,554.71		2,554.71
Labor	37,114.62	68,290.90	105,405.52
Labor Local	124,022.26	228,200.96	352,223.22
Overseas Differential - ODC	25,428.00		25,428.00
<b>Grand Total</b>	<b>775,468.47</b>		<b>1,071,960.33</b>
		<b>Fee @ 7.5%</b>	<b>80,397.02</b>
	<b>Inception to Date Total</b>		<b>1,152,357.35</b>

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

## **ANNEX A**

### **ENVIRONMENTAL SPECIALIST VISIT**

**23 April to 3 May 2014**

## ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION

### ENVIRONMENTAL SPECIALIST VISIT SUMMARY

#### **Objectives**

During the period from 24 April to 1 May 2014, site visits to Lofa, Bong, and Nimba Counties were conducted in order to carry out the following objectives:

- Evaluate the environmental situation along each road segment,
- Conduct a rapid environmental assessment (EA), using the Programmatic Environmental Assessment (PEA) checklist, of proposed and ongoing road rehabilitation,
- Identify mitigation measures to minimize potential social and environmental impacts of road rehabilitation,
- Develop Environmental & Social Mitigation & Monitoring Plans (ESMMP) for each engineering contractor, for each set of road rehabilitation projects,
- Conduct environmental and social impact monitoring on road segments where work has begun, and,
- Meet with engineering contractors, in particular, the Environmental Managers, to discuss the ESMMP, monitoring outcomes, and proposed requirements for future monitoring and reporting (i.e., implementation of the ESMMPs).

#### **Background**

Each contractor had submitted a draft Environmental Mitigation & Monitoring Plan (EMMP) to USAID as part of tender documents; each EMMP used a different format and none had been prepared in compliance with PEA requirements. Therefore, based on the rapid EA, the draft EMMPs, and the PEA requirements and PEA toolbox, the EMMPs were revised into ESMMPs and submitted to ES3R

Field Team Leaders and the COP for review. Each ES3R FTL will then provide the ESMMP to the engineering contractor for review, and with any revisions, the engineering contractors will submit them to the USAID COR for review and approval.

## **Site Visits Undertaken & Outcomes**

### **Lofa County Roads**

The three road segments were viewed. Work has begun along each (clearing, culvert installation), thus, along with conducting the rapid EA and developing an ESMMP, the first environmental & social monitoring exercise was conducted using the proposed ESMMP. The main environmental issues (see the Environmental & Social Mitigation & Monitoring Report -ESMMR- for details) are that erosion control is not being used in areas where siltation into watercourses and wetlands are a concern; excavation material and material from site clearing have been placed in wetlands and watercourses; and an excavation pit where a box culvert will be installed has collected water and needs to be drained. Along the roads, several areas of ponding and inadequate drainage are noted in the ESMMR.

The SSF Environmental Manager was with the team during site visits at which all issues were discussed. In addition, the ESMMP and ESMMR were further addressed during a follow-up site meeting.

## **Nimba County Roads**

Work has begun along all three road segments (clearing and culvert construction), thus as above, the first ESMMR was prepared based on the proposed ESMMP. The main issues are an area of ponding/lack of alternative drainage provided during culvert installation; and that measures will need to be put in place to minimize environmental and social impacts at the newly constructed worker camp.

Also, we saw many piles of lumber along the roads. While timber harvesting has been taking place long before road rehabilitation began (according to those interviewed), it may increase since access to the area will be improved. Assessment and consideration of mitigation —if possible mitigation exists— should have been identified at the time of site selection; this is included as part of ES3R's current site selection process.

The 21<sup>st</sup> Century Environmental & Safety Manager was with the team during the site visits, and after the visits, the ES3R team and 21<sup>st</sup> Century (and USAID COR and assistant MEO) met to discuss findings.

## **Bong County Roads**

No work has begun yet on the Palala road. The other two roads have mostly been cleared and culvert installation has begun. The main issues are that material from site clearing and culvert installation has been placed in wetlands and watercourses. Many piles of wood were also seen along the roadsides of the two Gbenequellah road segments. Westwood workers rent houses or rooms in villages along the roads, and at these, toilets and potable water may not be available. The engineering contractor will need to provide these for their workers.

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

## **ANNEX B**

### **FIELD VISIT TRIP REPORTS**

**June 2014**

<b>Trip Report</b>					
<b>Depart</b>	30th May 2014				
<b>return</b>	13th June 2014				
		<b>Objectives</b>	<b>Outputs</b>		
<b>Objectives</b>	<b>1</b>	Preparation for Prioritization Workshops in B, N and L	prepared and delivered		
	<b>2</b>	Update on Construction Progress	Site Progress meetings at B, G and L		
	<b>3</b>	Train Sis on m/c operation and maintenance	completed at B, G and L		
	<b>4</b>	Post Prioritization Coordination Meeting Review and plan forward	Fully resourced Workplan for next 4 weeks to follow		
	<b>5</b>	Site Progress meetings	Site Progress meetings at B, G and L		
<b>participants</b>	<b>1</b>	J. Clarke ETL, JC			
	<b>2</b>	Bill, M/c trainer			
	<b>3</b>	COP for meetings 12 & 13 June			
	<b>Trip Details</b>				
<b>date</b>	<b>key activities</b>		<b>Output</b>	<b>Action</b>	<b>date completed</b>
30/05/2014, Friday					
	1	depart Monrovia 07.00			



	2	arrive Gbarnga 11.00	Sent M/c trainer to Voinjama with package for FTL and SI M/c training			
	3	arrive Ganta 16.00	discussions on progress			
night at Ganta	6					
31 May Saturday	1	prepare PP for county Workshops				
	2	discussions on structure of workshops with RE Nimba and FLT	pre workshop briefing requested by RE for key county stakeholders			
night at Ganta						
1 June Sunday						
	1	Discussions on data required by presentation				
	2	David Wounuah arrives				
		review status of data collection				
	3	Meeting with SIDA delegation from Monrovia				
	4	M/c trainer moves to QAC site				
night at Ganta						
2 June Monday	1	Modify data slides for Nimba				
	2	finalize Nimba requirements for Workshop				
	3	Meeting with RE Nimba				

	4	Courier delivers projector to Gbarnga				
Night at Ganta						
3 June Tuesday	1	Journey to Gbarnga				
	2	Review status of Bong team's prioritization				
	3	Customise Bong presentation				
	4	Customise Bong w/s structure				
	5	M/c trainer in Bong				
Night at Gbarnga	6	Projector courier returns to Monrovia				
4/06/2014 Wednesday	1	Work shop in Bong admin building	very limited attendance from County based ministry officials (no one for MIA and MoA). FED CM attends for 2 hours.			
			Work shop commences at 10.00 and ends at 18.00 hrs			
			Despite significant opposition from all district Commissioners to population data from LISGIS work shop successfully concludes with prioritised list of roads 1 -24.		Prioritised list to be presented to MPW RE for distribution to all District Commissioners	
					Report to be present to county following completion of all county workshops, ES3R/USAID assessment, conclusions and	

					recommendations on 150 km targeted for design July - Oct 14	
	2	M/c trainer travels to Nimba with Nimba vehicle				
	3	Vincent arrives from Monrovia at 20,00 hrs with \$1,000 for work shop attendee allowances	Vincent arrives with goods and tools for Field Teams without weighbill		Need to develop operations guidelines for management of asset delivery and asset tracking/control	Introduction to Fleet, Transport and Asset Management. Tuesday 17th June for Office Manager
	4	Phone calls to Geoffrey and Jackson regards feedback from Bong work shop	Work shop delivery to be re tailored to suit anticipated audience of District Commissioners			
	5	COR returns to Monrovia				
Night in Gbarnga						
5 June Thursday	1	Site Progress Meeting	Westwood Project Manager reported as sick			
	2	Journey to Ganta via Westwood's Pallah road				
	3	Discussions with JBK on progress for Nimba w/s				

	4	Share ideas created in Bong work shop with Nimba and Lofa teams				
	5	M/c consultant in Paye, Nimba				
Night in Ganta						
6 June Friday	1	Issue with off side front steering Bong Ranger	Major concerns with Prestige motors mechanic's competency		TBD	
	2	site progress meeting 21st C in Paye	Issues require visit to Project manager who did not attend meeting		Meet with 21st PM when return to Monrovia	
			21C site staff are grossly under resourced. PM (also GM) has not visited site for weeks.			
	3	Visit County Superintendent, Sannequelle	concerns request to include southernmost Nimba District in selected list			
	4	Fuel for Lofa team taken using JCs Total card and Nimba's fuel drum	No fuel in Voinjama		urgent need to review and revise Loa fuel supply mechanism	13 June 2014. Fuel to be supplied from Monrovia
	5	M/c consultant in Paye, Nimba				
Night at Ganta	6	CIT connectivity	major constraints with connectivity (interent and mobile network) which is be oming progressively worse . Currently all FTLs have investd in both newtorks (cellcom and Lonestar) and use both		Alternative of communication required particularly for deliverables	

7 June Saturday	1	Discussions with JBK/DW on possibility of coordination meeting at Bong on 12th June	Bong coordination meeting to include: feedback on prioritization workshops. Establish guidelines for allocation per county of 150 km, operations guidelines - strengths and weaknesses, financial forecasting for detailed design stage, review templates formulated by RO			
	2	Leave for Voinjama	60 gallons of fuel for Lofa team in tray. Barrel from Nimba team			
	3	Meet RO in Gbarnga	deliver automatic level, request that RO initiate formulation of templates in support of detailed design phase			
	4	Continue to Voinjama				
Night at Voinjama						
8 June Sunday	1	Advise received for OM that passport photos are needed for TCN's Resident permits.	Send message to FTL, Nimba & Bong. Vincent sent to Monrovia via Gbarnga to collect photos. Driver also takes empty fuel drum from Lofa (no fuel in Voinjama). Driver arrives in Monrovia and reports no credit on Total card. OM to investigate and resolve. Driver to return to Lofa with essential fuel for Lofa.		Passports to be despatched to FTLs with survey equipment	
	2	Customise work shop for Lofa district				

	3	prepare agenda for Field Team post prioritization coordination meeting	tentative agends sent to FTLs, COP and COR			
	4	COR arrives 17.30. Review Lofa programme and customise CORs component	modify format of data sheets to accommodate COR suggestions			
	5	Dry run on presentation				
Night at Voinjama						
9 June Monday	1	Preparation for Lofa work shop				
	2	Delivery of workshop				
Night at Voinjama						
10 June Tuesday	1	Site visit to SSF roads				
	2	Site Progress Meeting SSF				
	3	Journey to Ganta				
	4	Discussions with JBK tayloring work shop for Nimba				
	5	Projector left in Voinjama. George to deliver to Ganta				
Night in Ganta						
11 June Wednesday	1	Projector delivered				
	2	Dry run in Ganta				

	3	Depart for Sannequielle				
	4	Workshop 10 -18.00				
	5	return to Ganta				
Night in Ganta						
12/06/2014 Thursday	1	Journey to Gbarnga				
	2	coordination meeting with Field teams	review county workshops			
			conclude on batch 1 designs (Nimba has bridge)			
			discussion on GB workshop conclude on 24th june			
			Tools and clothing needed urgently for Bong and Lofa			
Night in Gbarnga			Lofa to assist with GB GIS			
13-Jan	1	summary meeting with FTLs at Passion	one month resourced workplan			
			summary format of County report on Prioritization workshop		FTLs to compos workshop summary	Received from lofa nd Bong 14 & 15 June
	2	Return to Monrovia				
Monrovia	3	Journey to Prestige regarding service interval	review of service interval from 5,000 to 10,000km		Notice to be sent to all Field Offices	
Monrovia	4	visit Engineering Machine Vai Town	discussion on progress on ranging rods		JC to visit Technical Engineering Machine Inc, Vai Town 16 June @14.00hrs to inspect prototype	
return to Monrovia						

Trip Report						
<b>Depart</b>	22-Jun-14					
<b>return</b>	27-Jun-14					
		<b>Objectives</b>		<b>Outputs</b>		
<b>Objectives</b>	<b>1</b>	identify accomodation/office for selected roads survey		RMTC offers excellent accomodation		
	<b>2</b>	organise prioritization workshop for Grand Bassa		Completed		
	<b>3</b>	Deliver workshop		Completed		
	<b>4</b>	finalise roads scheduled for 1st batch of design deliverables		Lofa withdrawal requires review and revision of County contributions i.e. Lofa now probably excluded from Oct delivery date		
<b>participants</b>	<b>1</b>	J. Clarke ETL, JC				
	<b>Trip Details</b>					
<b>date</b>	<b>key activities</b>			<b>Output</b>		<b>Action</b>
22 June 2014 Sunday	1	depart Monrovia 10.00				
	2	visit RMTC				
	3	arrive Buchanan 1300		investigated 3 properties		
	4	Search for properties suited to office.accommodation				
night at						



Buchanan						
23-Jun	1	Visit FED office		Present PPP to FED CM		
	2	Visit County Admin Bldg		meet with Charles Cole. No other official available.		Thus far, 20 people have been invited from Districts i.e. 20*\$45 = \$900!. Decide to limit invites to 2/district.
	3			Visit hall where workshop is to take place		
	4	Visit Accelor Mittal hospital				
	5	COR arrives Buchanan				
Night at Buchanan						
24-Jun						
	1	continue with preparation of GB presentation				
	2	Finance crisis with ATMs in Buchanan not available				
	3					
	4	return to Monrovia to pick up cash				
Night in Monrovia						
25-Jun	1	Visit LBDI to pick up cash				
	2	Return to Buchanan				

night in Buchanan						
26-Jun						
	1	workshop delivery		FTL B to compile GB report		RO to compile report
	2	Phone calls from FTL Lofa regarding further escalation of reported Ebola incidents.		JC instructs cessation of field activities		
	3	Discussions with COP and COR regarding withdrawal		Collective decision made to withdraw		
	4	Instruction to withdraw given		Additional vehicle dispatched to Voinjama to assist with withdrawal		
	5	Discussions on Lofa LoE		Preliminary discussions on FT Lofa redeployment		
night in Buchanan						
27-Jun		visit RMTC		Suitable accommodation is available.		COP to contact JP regarding availability

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

## **ANNEX C**

### **MULTI CRITERIA ANALYSIS PRESENTATION**

#### **Summary**

## ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION

### MULTIPLE CRITERIA ANALYSIS PRESENTATION

#### SUMMARY

- Overview of USAID F2MRR activity
- ES3R Objectives
- Timelines for Development
- Economic Approach
  - Cost Benefit Analysis: judged by Mission Economist, USAID/Liberia to be inappropriate in this context
  - Alternative (as presented in Inception Report):

#### Multiple Criteria Analysis

Following an explanation of the Liberia road classifications, the process stages which facilitate the MCA were presented as follows:

- Consultation with key stakeholders
- Preliminary Surveys
  - Inventory Survey
  - Rapid Condition Survey
  - Identification of defects
  - Selection of Remedies
  - Data assessment and Costing
  - Quantify Population

‘Basic Access’ which is the design parameter is defined as follows:

*‘The least cost intervention for providing reliable all season access for the prevailing means of transport.’*

*‘The minimum level of rural transport infrastructure required to sustain socio economic activity.’*

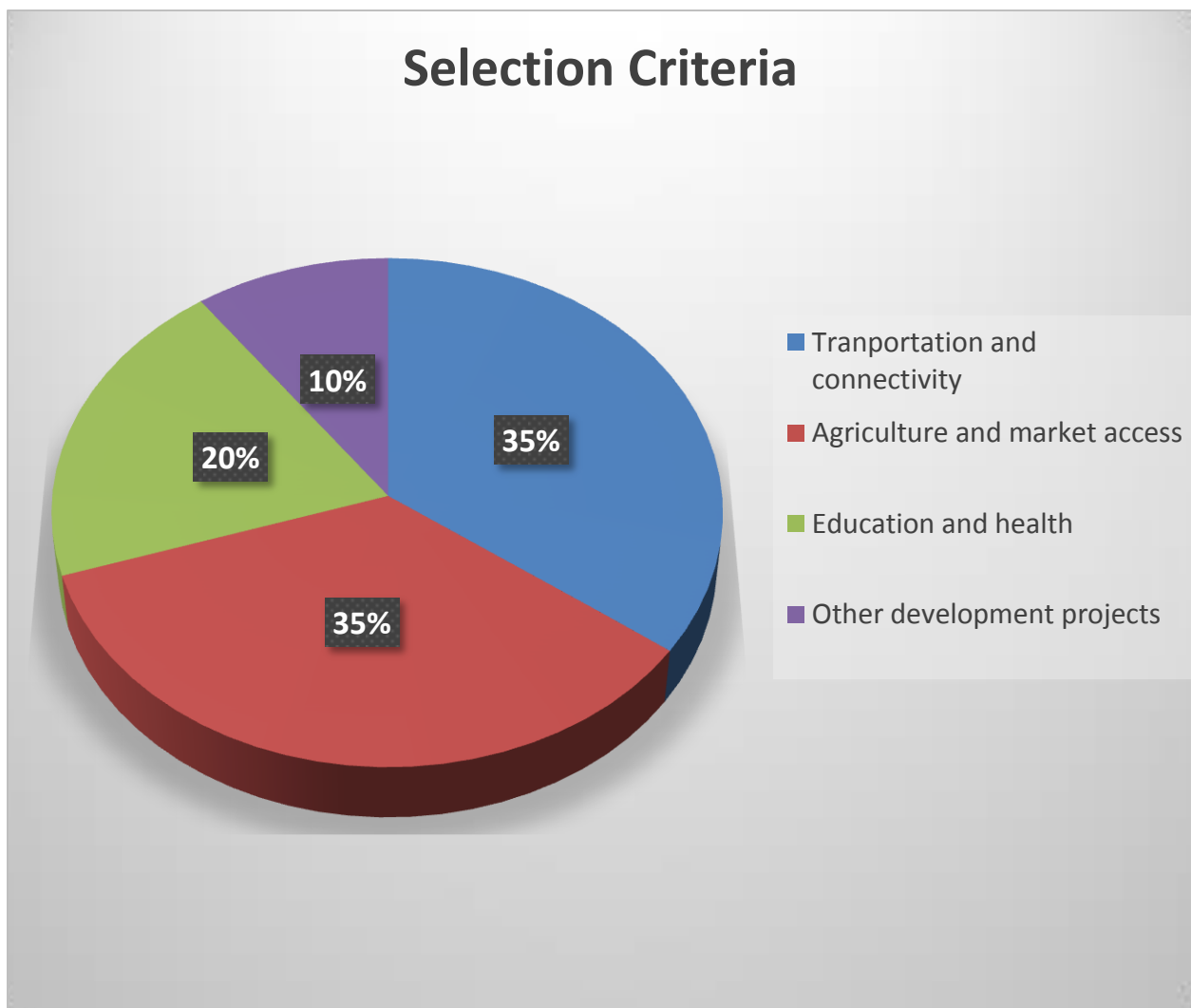
- Selection Factors and Weightings
  - Go / No go
  - Technical factors

- General Factors

**Go /No go:** These are factors which serve as checks to prevent investments on roads which would otherwise be in conflict with the following:

- Appropriations, laws and funding regulations
- Higher level strategic decisions

**Technical factors:** this is the technical selection criteria:



It was resolved during the presentation that these technical factors were appropriate for the selection process.

**General factors:**

- Population
- Average Cost per kilometer

These general factors are used in the calculation of 'Rank Value';

*where*

Economic Benefit Factor (EBF) = Sum total score of all socio / economic facilities within road corridor according to bias of project objectives.

$$\text{Rank Value} = \text{EBF} \times \text{Population} / \text{Total Cost}$$

Priority Rank is derived by arranging road rank value in a hierarchal order, where highest rank value has highest priority.

There was unanimous agreement amongst economists and transport planners in attendance at the presentation, that MCA was the most appropriate method of assessing priorities for Farm to Market roads.

The MCA tool as developed will be customized for each county and presented at a series of four workshops at each of the four county administrations in order that the participatory approach to the F2M road selection is achieved.

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

## **ANNEX D**

### **COUNTY ROAD LINKS**

#### **Prioritized Lists**

## Bong Roads Prioritized List

District	Road Name	Length Km	Total Points	Population	Estimated Cost	Ranking Factor= PoplnxEBF/Cost	Ranking
Panta	Foequelleh - Morgan	1.9	49	2491	48063.2	2.540	1
Salala	Salala - Sonyea	9.8	49	5178	287833.5	0.881	6
Zota	Foequelleh - Menequah- Yowee	13.2	56	3392	510997.7	0.372	8
Salala	Felela - Jarwuta	8.6	54	2277	486612.3	0.253	10
Yellequelleh	Yaindewoun -Nyan - Molo ta Junction	6.1	50	1132	252636.5	0.224	11
Suakoko	Gbondoi - Gbarnla	17.3	69	1610	522274.4	0.213	12
Jorquelleh	Weinsue - Kpai	8.7	64	815	248000.9	0.210	13
Suakoko	Sinyea - Kayata	13.4	54	1429	472096.6	0.163	14
Jorquelleh	Amos (Jimmy) town - Kpaiya	12.4	69	963	475629.5	0.140	15
Panta	Tobacco - Gbaota	3.1	38	456	129726.8	0.134	16
Salala	Maimu (Bassa town) - Veleyan - Molonakpaiga	10.2	50	746	283205.2	0.132	17
Suakoko	Suakoko (Geayea)- Gamue	9.4	48	733	296475.6	0.119	18
Yellequelleh	Taylor ta - Gaeyaerd - Belefana	14.1	37	1324	579242.8	0.085	19
Jorquelleh	Janyea - Darwata	10.4	40	788	491654.3	0.064	20
Jorquelleh	Samay - Baryata	14.1	59	472	487909.8	0.057	21
Fauma	Popota - Dombli	4.8	40	343	279597.5	0.049	22
Jorquelleh	Janyea - Goleemue	9.9	51	502	557773.1	0.046	23
Fauma	Lepolu Junction - Lepolu ta	3.3	27	101	120202.4	0.023	24
	<b>Total Km</b>	<b>191.7</b>					



## Lofa Roads Prioritized List

District	Road Name	Length (km)	Intervention	Rank	Selected (km)
Voinjama	Zenalomai - Boiboimai	5.10	Rehabilitation	19	
	Massanormai - Zawordamai - Movomai	10.0	Rehabilitation	18	
Zorzor	Konia - Ziggida	11.80	Rehabilitation	9	11.8
	Zelemmai - Womai	22.20	Rehabilitation	8	22.2
	Zorzor - Yeala Bordor	6.90	Rehabilitation	5	6.9
	Passama	5.50	Rehabilitation	11	
Salayea	Zorzor - Kpaiyee - Gbarnway	14.30	Rehabilitation	2	14.3
	Yarpuah Road	2.80	Rehabilitation	12	
Quardu Gbondi	Wankendu	2.30	Rehabilitation	25	
	Jarmulor - Kanala - Korlelah	7.60	Rehabilitation	10	
	John's Town - Tusu	25.0	Rehabilitation	6	25
	Sansanor - Moibadu	3.70	Rehabilitation	23	
	Kanala - Safudou	3.20	Rehabilitation	22	
Kolahun	Bolahun-Mbalotahun	2.60	Rehabilitation	16	
	Kolba City - Koilahun - Bolahun	9.70	Rehabilitation	4	9.7
	Checkpoint - Bassamolahun-Ngorkohun	7.20	Rehabilitation	7	7.2
	Taninahun and Bolobengun Road	11.50	Rehabilitation	20	
Foya	Foya Town - Sandia	15.20	Rehabilitation	1	15.2
	Kolochoe Road	3.30	Rehabilitation	14	
	Korlorsu Road	4.70	Rehabilitation	13	
	Menekorma Junction - Kpandu - K	4.60	Rehabilitation	17	
	Menekorma Highway - Karmbo	2.10	Rehabilitation	21	
	Leo Bengu - Weima - Kporndodu	8.30	Rehabilitation	15	
	Sengai - Menekorma Highway	1.40	Rehabilitation	24	
	Foya Town - Sangai - Kelima Pomi	8.20	Rehabilitation	3	8.2
Total		199.20			120.5

## Nimba Roads Prioritized List

Road Link	District	Length (Km)	Estimated Cost (USD)	FED Farmer Linked	Pop'n Linked	Cost Effectiveness (Popn/\$1,000 USD)	Economic Benefit Factor	Ranking Index	Rank	Batch
Bahn - Karnplay	Zoe-geh & Gbehlay-Geh	42.9	1,583,425	1,388	18,283	11.5465	93	1,073.82	1	
Bahn - Gbarplay	Zoe-geh	4.9	199,975	377	2,342	11.7115	48	562.15	2	B
Baylehglay - Siaplay	Zoe-Geh	5.6	241,100	267	1,797	7.4533	57	424.84	3	B
Payee - Gbanwin	Zoe-geh	3.6	279,595	209	2,214	7.9186	51	403.85	4	B
Wea Beadatua - Bahn	Buu-Yao	15	856,550	305	5,167	6.0323	62	374.01	5	B
Gbaleyee Junction - Kinnon	Yarmeim	14.2	686,031	-	5,666	8.2591	42	346.88	6	
Barn - Saclepea	Zoe-geh & Saclepea mah	14.5	570,525	575	1,573	2.7571	83	228.84	7	
Kpaglay - Nyenpa	Zoe-geh	2.5	132,375	78	566	4.2757	45	192.41	8	B
Geanplay - Souplay	Gbehlay-geh	5.1	327,556	52	1,067	3.2575	55	179.16	9	B

Saclepea - Tengbin	Saclepea Mahn & Meinpea mahn	12.8	423,650	-	1,724	4.0694	44	179.05	10	
Yekepa - Bolewee	Yarmeim	26	1,616,851	-	4,131	2.5550	66	168.63	11	
CNC Jctn - Y Intersection (2 <sup>nd</sup> Arm)	Meinpea-mahn	8.5	507,656	-	2,340	4.6094	36	165.94	12	
Dounpa - Zuaplay - Gogoin	Tappita & Saclepea Mahn	21.4	1,581,801	276	3,502	2.2139	71	157.19	13	A
Fleedin - Nyonkiayee	Yarweih Mehnssonoh	15.1	1,025,577	122	2,443	2.3821	51	121.49	14	B
Baylehglay - Rlekorlay	Buu-Yao	8.4	703,562	317	1,453	2.0652	54	111.52	15	B
Kpain - CNC Junction ((Tunukpuyee)	Meinpea-mahn	10.1	747,908	44	1,094	1.4627	59	86.30	16	C
Boyee Junction - Goekorpa	Yarwein Mehnssonoh	23.8	1,368,702	417	1,567	1.1449	51	58.39	17	C
Zontuo - Sangarplay	Zoe-geh	16.5	1,062,597	118	1,425	1.3411	42	56.32	18	
Garwonpa - Fleedin	Saclepea Mahn	11.7	497,656	210	581	1.1675	42	49.03	19	A
Tappita - Unification Town	Tappita & Gbee & Dorlu	20.2	1,016,740	50	923	0.9078	42	38.13	20	
Gbonvarglay - Gbarplay	Tappita	19.2	1,077,031	65	57	0.0529	32	1.69	21	

## Grand Bassa Roads Prioritized List

District	Road Name	Length Km	Total EBF points	P = Populati on	C = Cost	Ranking Factor = Ppln x EBF / Cost	Ranki ng
District 1	Compound 1 - Little Bassa - Varmah	21.4	81	4476	715,941.43	506.40	6
	Ben Luogan Town - Kor's Town Road	2.4	25	4659	126,784.20	918.69	3
	Compound 1 - Doezoan Road	6.8	55	3256	189,977.23	942.64	2
	Bokay Town - Moores Town Road	12	64	5365	534,494.98	642.40	4
District 2	Waka Town - Compound #2 Road	20.6	82	4406	1,222,505.80	295.53	13
	Compound #2 - Zarn Town Road	18.6	57	4961	800,559.80	353.22	9
	Compound #2 - Karngbo Town Road	23.7	76	4220	1,175,430.10	272.85	15
District 3	James Henry Town - Kardor Town Road	11.9	40	4182	475,200.70	352.02	10
	Rally(Yarmah Town - St John River Road)	12	41	4949	758,366.30	267.56	16
	Siahn - Waiker Town Road	3.2	47	2062	156,174.60	620.55	5
	FDA Junction - Keyah	29.6	51	3684	1,978,938.06	94.94	19
	Blewein - Doewhein - Sarwain Town	9.7	42	67305	393,392.10	7,185.73	1
	Garpu Town - Behn Town	6.4	37	2459	265,225.20	343.04	11
District 4	Gio Town - Little Kola Road	12.6	64	1733	460,421.80	240.89	18
	Timbo Town (Gbagee) - Yeahbee Town	4.8	33	1607	212,856.40	249.14	17
	Waka Town - Johnny Tutu Town Road	7.1	48	1973	340,011.30	278.53	14
	Karsuah - Newcess Beach Road	8.5	27	3650	319,190.50	308.75	12
	Yonbehn Town - Grand Kola	23.9	59	4821	710,752.70	400.19	8
	Keyan - Karjuah Town Road	2.1	20	300	156,067.70	38.44	20
	Tain Town - Frank town (2.1km)	2.1	37	1263	98,265.30	475.56	7

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

## **ANNEX E**

### **PERFORMANCE INDICATOR RESULT SHEETS**

<b>Name of Development Objective: Ease of Access to Markets Facilitated</b>			
<b>Name of Intermediate Result: Construction oversight provided for Local Contracts</b>			
<b>Name of Indicator: Length of road that has construction contract for rehabilitation awarded and in place</b>			
<b>Geographic Focus: Bong, Lofa and Nimba</b>			
<b>Is this an Annual Report indicator?</b> No ___ Yes ___ Yes ___, for Reporting Year(s) ___2013/2015___			
<b>DESCRIPTION</b>			
<b>Precise Definition(s):</b>			
<b>Unit of Measure: Kilometer</b>			
<b>Method of Calculation: Measure of length of roads</b>			
<b>Disaggregated by: None</b>			
<b>Justification &amp; Management Utility: Usefulness of Indicators</b>			
<b>PLAN FOR DATA ACQUISITION BY USAID</b>			
<b>Data collection method: Driving along the roads</b>			
<b>Data Source: Project sites</b>			
<b>Method of data acquisition by USAID: Reporting</b>			
<b>Frequency and timing of data acquisition by USAID: Annual</b>			
<b>Estimated cost of data acquisition: Included in project cost</b>			
<b>Individual responsible at USAID: David Wounuah</b>			
<b>Individual responsible for providing data to USAID: Howard Shelmerdine</b>			
<b>Location of Data Storage: PIDS</b>			
<b>DATA QUALITY ISSUES</b>			
<b>Date of Initial Data Quality Assessment: N/A</b>			
<b>Known Data Limitations and Significance (if any): N/A</b>			
<b>Actions Taken or Planned to Address Data Limitations: N/A</b>			
<b>Date of Future Data Quality Assessments: N/A</b>			
<b>Procedures for Future Data Quality Assessments: N/A</b>			
<b>PLAN FOR DATA ANALYSIS, REVIEW, &amp; REPORTING</b>			
<b>Data Analysis: Manual</b>			
<b>Presentation of Data: Tabulated</b>			
<b>Review of Data: Regular Check</b>			
<b>Reporting of Data: Quarterly and Annual Report</b>			
<b>OTHER NOTES</b>			
<b>Notes on Baselines/Targets: Stipulated</b>			
<b>Other Notes: None</b>			
<b>PERFORMANCE INDICATOR VALUES</b>			
<b>Year</b>	<b>Target</b>	<b>Actual</b>	<b>Notes</b>
2013	0	0	
2014	83.5	83.5	Contracts awarded January 2014
2015	150		
<b>THIS SHEET LAST UPDATED ON: March 2014</b>			

Performance Indicator Reference Sheet			
Name of Development Objective: Ease of Access to Markets Facilitated			
Name of Intermediate Result: Target roads determined			
Name of Indicator: Prioritized target roads for further design development based upon stakeholders needs and requirements			
Geographic Focus: Bong, Lofa ,Nimba and Grand Bassa			
Is this an Annual Report indicator? No ___ Yes _Yes___, for Reporting Year(s) ___2013/2015___			
DESCRIPTION			
Precise Definition(s):			
Unit of Measure: Kilometer			
Method of Calculation: Measure of length of roads			
Disaggregated by: None			
Justification & Management Utility: Usefulness of Indicators			
PLAN FOR DATA ACQUISITION BY USAID			
Data collection method: Driving along the roads			
Data Source: Project sites			
Method of data acquisition by USAID: Reporting			
Frequency and timing of data acquisition by USAID: Annual			
Estimated cost of data acquisition: Included in project cost			
Individual responsible at USAID: David Wounuah			
Individual responsible for providing data to USAID: Howard Shelmerdine			
Location of Data Storage: PIDS			
DATA QUALITY ISSUES			
Date of Initial Data Quality Assessment: N/A			
Known Data Limitations and Significance (if any): N/A			
Actions Taken or Planned to Address Data Limitations: N/A			
Date of Future Data Quality Assessments: N/A			
Procedures for Future Data Quality Assessments: N/A			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data Analysis: Manual			
Presentation of Data: Tabulated			
Review of Data: Regular Check			
Reporting of Data: Quarterly and Annual Report			
OTHER NOTES			
Notes on Baselines/Targets: Stipulated			
Other Notes: None			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2013	0		
2014	150	450	Prioritized roads selected for total project in Y1
2015	300		Prioritized roads selected for total project in Y1
THIS SHEET LAST UPDATED ON: June 2014			

Performance Indicator Reference Sheet			
Name of Development Objective: Ease of Access to Markets Facilitated			
Name of Intermediate Result: Prequalification document submitted			
Name of Indicator: Develop evaluation criteria and conduct full assessment of available engineering sources.			
Geographic Focus: Bong, Lofa, Nimba, Grand Bassa and Monrovia			
Is this an Annual Report indicator? No ___ Yes _Yes __, for Reporting Year(s) ___2013/2015___			
DESCRIPTION			
Precise Definition(s):			
Unit of Measure: Number			
Method of Calculation: Training logs/Attendance registers			
Disaggregated by: Sex			
Justification & Management Utility: Usefulness of Indicators			
PLAN FOR DATA ACQUISITION BY USAID			
Data collection method: Assessment			
Data Source: Project trainer			
Method of data acquisition by USAID: Reporting			
Frequency and timing of data acquisition by USAID: Annual			
Estimated cost of data acquisition: Included in project cost			
Individual responsible at USAID: David Wounuah			
Individual responsible for providing data to USAID: Howard Shelmerdine			
Location of Data Storage: PIDS			
DATA QUALITY ISSUES			
Date of Initial Data Quality Assessment: N/A			
Known Data Limitations and Significance (if any): N/A			
Actions Taken or Planned to Address Data Limitations: N/A			
Date of Future Data Quality Assessments: N/A			
Procedures for Future Data Quality Assessments: N/A			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data Analysis: Manual			
Presentation of Data: Tabulated			
Review of Data: End of training period			
Reporting of Data: Quarterly and Annual Report			
OTHER NOTES			
Notes on Baselines/Targets: Stipulated			
Other Notes: None			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2013	0	0	
2014	5	5	Five A & E firms selected for participation in ES3R project
2015			
THIS SHEET LAST UPDATED ON: March 2014			



Performance Indicator Reference Sheet			
Name of Development Objective: Ease of Access to Markets Facilitated			
Name of Intermediate Result: Local A&E firms identified			
Name of Indicator: Expression of interest evaluation completed for number of A&E firms			
Geographic Focus: Bong, Lofa, Nimba, Grand Bassa and Monrovia			
Is this an Annual Report indicator? No ___ Yes _Yes ___, for Reporting Year(s) ___2013/2015___			
DESCRIPTION			
Precise Definition(s):			
Unit of Measure: Number			
Method of Calculation: Training logs/Attendance registers			
Disaggregated by: Sex			
Justification & Management Utility: Usefulness of Indicators			
PLAN FOR DATA ACQUISITION BY USAID			
Data collection method: Evaluation			
Data Source: Project trainer			
Method of data acquisition by USAID: Reporting			
Frequency and timing of data acquisition by USAID: Annual			
Estimated cost of data acquisition: Included in project cost			
Individual responsible at USAID: David Wounuah			
Individual responsible for providing data to USAID: Howard Shelmerdine			
Location of Data Storage: PIDS			
DATA QUALITY ISSUES			
Date of Initial Data Quality Assessment: N/A			
Known Data Limitations and Significance (if any): N/A			
Actions Taken or Planned to Address Data Limitations: N/A			
Date of Future Data Quality Assessments: N/A			
Procedures for Future Data Quality Assessments: N/A			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data Analysis: Manual			
Presentation of Data: Tabulated			
Review of Data: End of training period			
Reporting of Data: Quarterly and Annual Report			
OTHER NOTES			
Notes on Baselines/Targets: Stipulated			
Other Notes: None			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2013	0	0	
2014	8	8	Number of firms interviewed and assessed
2015			
THIS SHEET LAST UPDATED ON: March 2014			



